

REMARKS

By the foregoing Amendment, Claims 1 and 12 are amended and Claim 21 is cancelled. Entry of the Amendment, and favorable consideration thereof is earnestly requested.

All Claims stand rejected either under 35 U.S.C. §102(b) as being anticipated by Giers (U.S. Patent No. 6,410,993) or under 35 U.S.C. 103(a) as being unpatentable over Giers in view of Tsukamoto (U.S. Patent No. 6,231,133). Applicant respectfully asks the Examiner to reconsider these rejections in view of the above Amendments and the below Remarks.

All claims of the present application have been amended to even further distinguish the cited prior art. More specifically, all claims now require (i) an auxiliary control link electrically connecting the first brake component and the second brake component, and (ii) that the auxiliary control link be adapted to transmit the control signals, after the control signals have been received by one of the first brake component and the second brake component, from the one of the first brake component and the second brake component that received the control signals to the other one of said first brake component and said second brake component when a failure occurs in one of said first control network or said second control network.

Applicant respectfully submits that neither Giers nor Tsukamoto discloses, teaches or suggests the above-highlighted elements.

First, Giers does not disclose, teach or suggest any auxiliary control link between the brake components (i.e., the brake actuators 5, 6) themselves. Rather, Giers, at most, teaches an “auxiliary control link” between each actuator

and the control network with which the other actuator is associated. The Examiner himself appears to recognize this in Paragraph 9 of the outstanding Office Action, wherein the Examiner states "At which time an auxiliary link is established between actuator in the failed network to the properly operating network." (emphasis added).

Secondly, even if Giers could somehow be interpreted to teach that the "auxiliary control links" disclosed therein electrically connect the two actuators (which Applicant believes is not a proper interpretation of Giers), there still would be no disclosure, teaching or suggestion that the control signals be transmitted, after the control signals have been received by one of brake components, from the brake component that received the control signals to the other brake component. Rather, in Giers, if a failure occurs in one control network, control signals for the brake component associated with the failing network would be passed from the microprocessor in the still functioning network, to the commutator in the still functioning network, and then to the brake component associated with the failing network. Control signals in Giers are not passed to the brake component associated with the still functioning network, and then to the brake component associated with the failing network, as is required by all claims of the present application.

This difference between Giers and the present invention, as claimed, is an important one. This is true because, while the system in Giers may provide adequate failsafe control in some circumstances, in other circumstances it would not. For example, assume that there is a failure within Circuit I of the Giers system. If the failure were located in an "upstream" portion of the circuit, such as in input unit 3 or the sensors associated therewith, or within microprocessor 1 itself, microprocessor 1, via its communication 11 with microprocessor 2, could

detect the failure, and send a fail signal to commutator 9 causing it to switch from an inactive position to an active position such that microprocessor 2 would assume control of actuator 5 of failing Circuit I. However, if the failure were located in a “downstream” portion of the Circuit, such as in the communication link between microprocessor 1 and commutator 9, in the communication link between commutator 9 and actuator 5, or within commutator 9 itself, microprocessor 1 would still be processing data correctly, such that even the communication 11 between microprocessor 1 and microprocessor 2 would reveal no error condition. As such, no fail signal would be transmitted, no switching would occur at commutator 9, and actuator 5 would not be properly controlled. Furthermore, even if switching at commutator 9 did occur, if the failure was in the communication link between commutator 9 and actuator 5, even microprocessor 2 would be unable to communicate with actuator 5.

In accordance with the present invention, as claimed, these problems are avoided. This is true because the auxiliary control link is between the brake components themselves, rather than relying upon parts of the communications networks, which parts themselves may be failing. Thus, in the present invention, if a brake component fails to receive control signals through its “normal” communications network, for whatever reason, it can be provided with control signals directly from another brake component, after that other brake component has received control signals through *its* communications network.

Similarly, there is simply no disclosure, teaching or suggestion in Tsukamoto of the elements discussed above. Rather, the “no fault” signals which are transmitted, for example, between brake pressure controllers 10F and 10R in Figure 19 via the communications link between them are generated in the brake pressure controllers 10F and 10R themselves. The “no fault” signals are not

received by one of the brake pressure controllers 10F and 10R and transmitted from it to the other one of the brake pressure controllers 10F and 10R. Indeed, Tsukamoto is relied upon merely for its teachings concerning the provision of a single control unit and the provision of paired brake components on a common axle.

Since neither of the cited prior art references discloses, teaches or suggests in any way all of the elements of any claim of the present application, Applicant respectfully submits that a combination of the two would not render any claim thereof unpatentable.

All claims of the current application also stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting as unpatentable over copending Application No. 10/674,199 (now issued as U.S. Patent No. 6,984,001). Applicant files herewith a Terminal Disclaimer which obviates this rejection.

For the foregoing reasons, Applicant respectfully submits that all pending claims, namely Claims 1-20, are patentable over the references of record, and earnestly solicits allowance of the same.

Respectfully submitted,



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Amendments to the Drawings:

No amendments to the Drawings are made herein.